Richard A Bourne

List of Publications by Year
in descending order

88 papers	3,575 citations	136950 32 h-index	149698 56 g-index
95 all docs	95 docs citations	95 times ranked	3543 citing authors

#	Article	IF	Citations
1	Automated multi-objective reaction optimisation: which algorithm should I use?. Reaction Chemistry and Engineering, 2022, 7, 987-993.	3.7	21
2	Steps, hops and turns: examining the effects of channel shapes on mass transfer in continuous electrochemical reactors. Reaction Chemistry and Engineering, 2022, 7, 264-268.	3.7	1
3	Efficient Hydrolytic Hydrogen Evolution from Sodium Borohydride Catalyzed by Polymer Immobilized Ionic Liquidâ€Stabilized Platinum Nanoparticles. ChemCatChem, 2022, 14, .	3.7	11
4	Resonant Electron Spectroscopy: Identification of Atomic Contributions to Valence States. Faraday Discussions, 2022, , .	3.2	2
5	Autonomous polymer synthesis delivered by multi-objective closed-loop optimisation. Polymer Chemistry, 2022, 13, 1576-1585.	3.9	32
6	Modern advancements in continuous-flow aided kinetic analysis. Reaction Chemistry and Engineering, 2022, 7, 1037-1046.	3.7	16
7	Development of a multistep, electrochemical flow platform for automated catalyst screening. Catalysis Science and Technology, 2022, 12, 4266-4272.	4.1	3
8	Heteroatom modified polymer immobilized ionic liquid stabilized ruthenium nanoparticles: Efficient catalysts for the hydrolytic evolution of hydrogen from sodium borohydride. Molecular Catalysis, 2022, 528, 112476.	2.0	1
9	Rapid, automated determination of reaction models and kinetic parameters. Chemical Engineering Journal, 2021, 413, 127017.	12.7	33
10	Alternating polarity for enhanced electrochemical synthesis. Reaction Chemistry and Engineering, 2021, 6, 147-151.	3.7	37
11	Selective separation of amines from continuous processes using automated pH controlled extraction. Reaction Chemistry and Engineering, 2021, 6, 1806-1810.	3.7	4
12	Autonomous optimisation of a nanoparticle catalysed reduction reaction in continuous flow. Chemical Communications, 2021, 57, 4926-4929.	4.1	16
13	An automated computational approach to kinetic model discrimination and parameter estimation. Reaction Chemistry and Engineering, 2021, 6, 1404-1411.	3.7	16
14	Improved conversion of residual MSW biomass waste to sugars using online process monitoring and integrated contamination control. Bioresource Technology Reports, 2021, 13, 100612.	2.7	3
15	Flow chemistry for process optimisation using design of experiments. Journal of Flow Chemistry, 2021, 11, 75-86.	1.9	32
16	Acid number, viscosity and end-point detection in a multiphase high temperature polymerisation process using an online miniaturised MEMS Fabry-PÃ©rot interferometer. Talanta, 2021, 224, 121735.	5.5	4
17	Electrochemical Generation of <i>N</i>â€Heterocyclic Carbenes for Use in Synthesis and Catalysis. Advanced Synthesis and Catalysis, 2021, 363, 3189-3200.	4.3	15
18	On-Demand Electrochemical Synthesis of Tetrakisacetonitrile Copper(I) Triflate and Its Application in the Aerobic Oxidation of Alcohols. Inorganic Chemistry, 2021, 60, 6976-6980.	4.0	6

#	ARTICLE	IF	CITATIONS
19	Mixing performance and continuous production of nanomaterials in an advanced-flow reactor. Chemical Engineering Journal, 2021, 412, 128565.	12.7	34
20	MVMOO: Mixed variable multi-objective optimisation. Journal of Global Optimization, 2021, 80, 865-886.	1.8	16
21	Automated self-optimisation of multi-step reaction and separation processes using machine learning. Chemical Engineering Journal, 2020, 384, 123340.	12.7	97
22	Making electrochemistry easily accessible to the synthetic chemist. Green Chemistry, 2020, 22, 3358-3375.	9.0	176
23	Decoupling the relative rate of hydrogen uptake via convection and mass transfer by a single catalytic pellet in a scaled down trickle bed reactor. Chemical Engineering Journal, 2020, 394, 124290.	12.7	4
24	Self-optimising reactive extractions: towards the efficient development of multi-step continuous flow processes. Journal of Flow Chemistry, 2020, 10, 199-206.	1.9	20
25	Statistical quantification of sub-sampling representativeness and uncertainty for waste-derived solid recovered fuel (SRF): Comparison with theory of sampling (ToS). Journal of Hazardous Materials, 2020, 388, 122013.	12.4	5
26	Rapid production of block copolymer nano-objects <i>via</i> continuous-flow ultrafast RAFT dispersion polymerisation. Polymer Chemistry, 2020, 11, 3465-3474.	3.9	22
27	A Versatile Electrochemical Batch Reactor for Synthetic Organic and Inorganic Transformations and Analytical Electrochemistry. Organic Process Research and Development, 2020, 24, 1084-1089.	2.7	10
28	Process Monitoring of Moisture Content and Mass Transfer Rate in a Fluidised Bed with a Low Cost Inline MEMS NIR Sensor. Pharmaceutical Research, 2020, 37, 84.	3.5	19
29	Data fusion strategies to combine sensor and multivariate model outputs for multivariate statistical process control. Analytical and Bioanalytical Chemistry, 2020, 412, 2151-2163.	3.7	22
30	Kinetic Treatments for Catalyst Activation and Deactivation Processes based on Variable Time Normalization Analysis. Angewandte Chemie, 2019, 131, 10295-10299.	2.0	15
31	Introduction to Synthesis 4.0: towards an internet of chemistry. Reaction Chemistry and Engineering, 2019, 4, 1504-1505.	3.7	8
32	Algorithms for the self-optimisation of chemical reactions. Reaction Chemistry and Engineering, 2019, 4, 1545-1554.	3.7	92
33	Direct Synthesis of Multiplexed Metalâ€Nanowireâ€Based Devices by Using Carbon Nanotubes as Vector Templates. Angewandte Chemie, 2019, 131, 10033-10037.	2.0	4
34	Electron spectroscopy of ionic liquids: experimental identification of atomic orbital contributions to valence electronic structure. Physical Chemistry Chemical Physics, 2019, 21, 18893-18910.	2.8	9
35	Definitive screening designs for multistep kinetic models in flow. Reaction Chemistry and Engineering, 2019, 4, 1565-1570.	3.7	16
36	Direct Synthesis of Multiplexed Metalâ€Nanowireâ€Based Devices by Using Carbon Nanotubes as Vector Templates. Angewandte Chemie - International Edition, 2019, 58, 9928-9932.	13.8	10

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37	Kinetic Treatments for Catalyst Activation and Deactivation Processes based on Variable Time Normalization Analysis. Angewandte Chemie - International Edition, 2019, 58, 10189-10193.	13.8	46
38	Highly Selective and Solvent-Dependent Reduction of Nitrobenzene to <i>N</i>-Phenylhydroxylamine, Azoxybenzene, and Aniline Catalyzed by Phosphino-Modified Polymer Immobilized Ionic Liquid-Stabilized AuNPs. ACS Catalysis, 2019, 9, 4777-4791.	11.2	77
39	Characterisation of polyphosphate coated aluminium-doped titania nanoparticles during milling. Journal of Colloid and Interface Science, 2019, 548, 110-122.	9.4	5
40	All-aqueous continuous-flow RAFT dispersion polymerisation for efficient preparation of diblock copolymer spheres, worms and vesicles. Reaction Chemistry and Engineering, 2019, 4, 852-861.	3.7	34
41	A Hybridised Optimisation of an Automated Photochemical Continuous Flow Reactor. Chimia, 2019, 73, 817.	0.6	11
42	Computational fluid dynamic enabled design optimisation of miniaturised continuous oscillatory baffled reactors in chemical processing. International Journal of Computational Fluid Dynamics, 2019, 33, 317-331.	1.2	4
43	Enhanced process development using automated continuous reactors by self-optimisation algorithms and statistical empirical modelling. Tetrahedron, 2018, 74, 3158-3164.	1.9	34
44	Highly efficient aqueous phase reduction of nitroarenes catalyzed by phosphine-decorated polymer immobilized ionic liquid stabilized PdNPs. Catalysis Science and Technology, 2018, 8, 1454-1467.	4.1	63
45	Salt enhanced solvent relaxation and particle surface area determination via rapid spin-lattice NMR. Powder Technology, 2018, 333, 458-467.	4.2	28
46	Experimental validation of calculated atomic charges in ionic liquids. Journal of Chemical Physics, 2018, 148, 193817.	3.0	24
47	Machine learning meets continuous flow chemistry: Automated optimization towards the Pareto front of multiple objectives. Chemical Engineering Journal, 2018, 352, 277-282.	12.7	221
48	Heteroatom Donorâ€Decorated Polymerâ€Immobilized Ionic Liquid Stabilized Palladium Nanoparticles: Efficient Catalysts for Roomâ€Temperature Suzukiâ€Miyaura Crossâ€Coupling in Aqueous Media. Advanced Synthesis and Catalysis, 2018, 360, 3716-3731.	4.3	32
49	Thermal stability of dialkylimidazolium tetrafluoroborate and hexafluorophosphate ionic liquids: <i>ex situ</i> bulk heating to complement <i>in situ</i> mass spectrometry. Physical Chemistry Chemical Physics, 2018, 20, 16786-16800.	2.8	16
50	Highly efficient aqueous phase chemoselective hydrogenation of Î±,Î²-unsaturated aldehydes catalysed by phosphine-decorated polymer immobilized IL-stabilized PdNPs. Green Chemistry, 2017, 19, 1635-1641.	9.0	39
51	A one-pot-one-reactant synthesis of platinum compounds at the nanoscale. Nanoscale, 2017, 9, 14385-14394.	5.6	22
52	NEXAFS spectroscopy of ionic liquids: experiments <i>versus</i> calculations. Physical Chemistry Chemical Physics, 2017, 19, 31156-31167.	2.8	16
53	Rapid multistep kinetic model generation from transient flow data. Reaction Chemistry and Engineering, 2017, 2, 103-108.	3.7	71
54	Atomic charges of sulfur in ionic liquids: experiments and calculations. Faraday Discussions, 2017, 206, 183-201.	3.2	20

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55	MEMS Fabry-Perot Interferometer Based Spectral Sensors for Industrial Applications. , 2017, , .		4
56	Efficient and selective oxidation of sulfides in batch and continuous flow using styrene-based polymer immobilised ionic liquid phase supported peroxotungstates. RSC Advances, 2016, 6, 73118-73131.	3.6	27
57	Self-optimisation of the final stage in the synthesis of EGFR kinase inhibitor AZD9291 using an automated flow reactor. Reaction Chemistry and Engineering, 2016, 1, 366-371.	3.7	89
58	Online quantitative mass spectrometry for the rapid adaptive optimisation of automated flow reactors. Reaction Chemistry and Engineering, 2016, 1, 96-100.	3.7	101
59	Chapter 12. The Growing Impact of Continuous Flow Methods on the Twelve Principles of Green Chemistry. RSC Green Chemistry, 2016, , 140-155.	0.1	10
60	X-ray spectroscopy for chemistry in the 2-4â€…keV energy regime at the XMaS beamline: ionic liquids, Rh and Pd catalysts in gas and liquid environments, and Cl contamination in Î³-Al₂O₃. Journal of Synchrotron Radiation, 2015, 22, 1426-1439.	2.4	19
61	Continuous catalytic upgrading of ethanol to n-butanol and >C₄ products over Cu/CeO₂ catalysts in supercritical CO₂. Green Chemistry, 2015, 17, 3018-3025.	9.0	72
62	Activation and Deactivation of a Robust Immobilized Cp*Ir-Transfer Hydrogenation Catalyst: A Multielement <i>in Situ</i> X-ray Absorption Spectroscopy Study. Journal of the American Chemical Society, 2015, 137, 4151-4157.	13.7	19
63	Remote-controlled experiments with cloud chemistry. Nature Chemistry, 2015, 7, 1-5.	13.6	96
64	Catalytic nanoreactors in continuous flow: hydrogenation inside single-walled carbon nanotubes using supercritical CO₂. Chemical Communications, 2014, 50, 5200-5202.	4.1	27
65	Synthesis of antimalarialtrioxanesvia continuous photo-oxidation with¹O₂in supercritical CO₂. Green Chemistry, 2013, 15, 177-180.	9.0	36
66	Supercritical CO2Mediated Incorporation of Pd onto Templated Carbons: A Route to Optimizing the Pd Particle Size and Hydrogen Uptake Density. ACS Applied Materials & Interfaces, 2013, 5, 5639-5647.	8.0	24
67	Real-Time Feedback Control Using Online Attenuated Total Reflection Fourier Transform Infrared (ATR) Tj ETQq1 1 0.784314 rgBT /Ov 2013, 67, 1127-1131.	2.2	62
68	The Effect of Self-Optimisation Targets on the Methylation of Alcohols Using Dimethyl Carbonate in Supercritical CO₂. Journal of Flow Chemistry, 2012, 2, 24-27.	1.9	41
69	Adsorption of Pd(hfac)2 on mesoporous silica SBA-15 using supercritical CO2 and its role in the performance of Pdâ€"SiO2 catalyst. Journal of Supercritical Fluids, 2012, 69, 21-28.	3.2	36
70	Maximising the efficiency of continuous photo-oxidation with singlet oxygen in supercritical CO2 by use of fluorous biphasic catalysis. Chemical Communications, 2012, 48, 3073.	4.1	46
71	Immobilised photosensitisers for continuous flow reactions of singlet oxygen in supercritical carbon dioxide. Chemical Science, 2011, 2, 1059.	7.4	65
72	Adaptive Process Optimization for Continuous Methylation of Alcohols in Supercritical Carbon Dioxide. Organic Process Research and Development, 2011, 15, 932-938.	2.7	58

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73	Could the energy cost of using supercritical fluids be mitigated by using CO2 from carbon capture and storage (CCS)?. Green Chemistry, 2011, 13, 2727.	9.0	26
74	Green chemistry: what is the way forward?. Mendeleev Communications, 2011, 21, 235-238.	1.6	20
75	Inducing fractures and increasing cleat apertures in a bituminous coal under isotropic stress via application of microwave energy. International Journal of Coal Geology, 2011, 88, 75-82.	5.0	111
76	Selfâ€Optimizing Continuous Reactions in Supercritical Carbon Dioxide. Angewandte Chemie - International Edition, 2011, 50, 3788-3792.	13.8	113
77	Realâ€Time Product Switching Using a Twin Catalyst System for the Hydrogenation of Furfural in Supercritical CO₂. Angewandte Chemie - International Edition, 2010, 49, 8856-8859.	13.8	134
78	Continuous Acid-Catalyzed Methylations in Supercritical Carbon Dioxide: Comparison of Methanol, Dimethyl Ether and Dimethyl Carbonate as Methylating Agents. Organic Process Research and Development, 2010, 14, 411-416.	2.7	49
79	The Continuous Acid-Catalysed Etherification of Aliphatic Alcohols Using Stoichiometric Quantities of Dialkyl Carbonates. Organic Process Research and Development, 2010, 14, 1420-1426.	2.7	21
80	Cleaner Continuous Photoâ€Oxidation Using Singlet Oxygen in Supercritical Carbon Dioxide. Angewandte Chemie - International Edition, 2009, 48, 5322-5325.	13.8	86
81	Strategies for cleaner oxidations using photochemically generated singlet oxygen in supercritical carbon dioxide. Green Chemistry, 2009, 11, 1787.	9.0	34
82	The continuous self aldol condensation of propionaldehyde in supercritical carbon dioxide: a highly selective catalytic route to 2-methylpentenal. Green Chemistry, 2009, 11, 409.	9.0	47
83	The 24 Principles of Green Engineering and Green Chemistry: â€œIMPROVEMENTS PRODUCTIVELYâ€. Green Chemistry, 2008, 10, 268.	9.0	205
84	Homogeneous photochemical oxidation via singlet O2 in supercritical CO2. Chemical Communications, 2008, , 4457.	4.1	45
85	Conference Report: Bridging chemistry and engineering. Green Chemistry, 2008, 10, 1247.	9.0	0
86	Maximising opportunities in supercritical chemistry: the continuous conversion of levulinic acid to Î³-valerolactone in CO2. Chemical Communications, 2007, , 4632.	4.1	176
87	2DCOR-GC:â€‰ An Application of the Generalized Two-Dimensional Correlation Analysis as a Route To Optimization of Continuous Flow Supercritical Fluid Reactions. Analytical Chemistry, 2004, 76, 6197-6206.	6.5	20
88	Highly efficient and selective aqueous phase hydrogenation of aryl ketones, aldehydes, furfural and levulinic acid and its ethyl ester catalyzed by phosphine oxide-decorated polymer immobilized ionic liquid-stabilized ruthenium nanoparticles. Catalysis Science and Technology, 0, , .	4.1	6